

Amendments to the Drawings

Attached hereto are three (3) sheets of corrected formal drawings. The corrected formal drawings incorporate the following drawing changes:

In Figs. 1-3, the legend “Related Art” has been added.

It is respectfully requested that the corrected formal drawings be approved and made a part of the record of the above-identified application.

Attachment: Replacement Sheets

REMARKS

Applicants appreciate the Examiner's thorough consideration provided the present application. Claims 1-6 are now present in the application. Claims 1-6 have been amended. Claims 7-10 have been withdrawn and hereby cancelled. Claims 1 and 5 are independent. Reconsideration of this application, as amended, is respectfully requested.

Election/Restrictions Requirement

The Examiner has acknowledged Applicants' election of Group I (claims 1-6), and has withdrawn claims 7-10 from further consideration. Applicants respectfully submit that claims 7-10 have been cancelled.

Priority Under 35 U.S.C. §119

Applicants thank the Examiner for acknowledging Applicants' claim for foreign priority under 35 U.S.C. §119, and receipt of the certified priority document.

Information Disclosure Citation

Applicants thank the Examiner for considering the references supplied with the Information Disclosure Statement filed on April 28, 2005, and for providing Applicants with an initialed copy of the PTO-1449 form filed therewith.

Drawings Objections

The drawings have been objected to due to the lack of a legend in FIGs. 1-3 such as "Related Art." Applicants have submitted three (3) sheets of corrected formal drawings to address the Examiner's requested changes. Accordingly, Applicants respectfully submit that this objection has been obviated and/or rendered moot. Reconsideration and withdrawal of the Examiner's drawings objection are respectfully requested.

Claim Objections

Claim 2-4 and 6 have been objected to due to the presence of minor informalities. In view of the foregoing amendments, it is respectfully submitted that this objection has been addressed. Accordingly, Applicants respectfully submit that this objection has been obviated and/or rendered moot. Reconsideration and withdrawal of this objection are respectfully requested.

Claim Rejections Under 35 U.S.C. § 103

Claims 1 and 5 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Do, WO/2002/087060, in view of Miyamoto, JP 09-129470. Claims 2-4 and 6 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Do in view of Miyamoto, and further in view of Gardos, U.S. Patent No. 4,376,710. These rejections are respectfully traversed.

Complete discussions of the Examiner's rejections are set forth in the Office Action, and are not being repeated here.

In light of the foregoing amendments to the claims, Applicants respectfully submit that this rejection has been obviated and/or rendered moot. Without conceding to the propriety of the Examiner's rejection, but merely to timely advance the prosecution of the application, as the Examiner will note, independent claims 1 and 5 have been amended to address the Examiner's rejection.

Independent claim 1 has been amended to recite "the winding coil having a ring shape and including: a plurality of turns of a conductive wire; a self-lubricating polyamide layer surrounding the conductive wire; and a molding material surrounding the self-lubricating polyamide layer such that the conductive wire, the self-lubricating polyamide layer and the molding material together are an integral structure, the self-lubricating polyamide layer being located between the conductive wire and the molding material."

Independent claim 5 has been amended to recite "the winding coil having a ring shape and including: a plurality of turns of a conductive wire; a polyester imide layer surrounding the conductive wire; a polyamide imide layer surrounding the polyester imide layer; a self-lubricating polyamide layer surrounding the polyester imide layer; and a molding material surrounding the self-lubricating polyamide layer such that the conductive wire, the polyester imide layer, the polyamide imide layer, the self-lubricating polyamide layer and the molding material together are an integral structure, the self-lubricating polyamide layer being located between the conductive wire and the molding material."

Support for the above combinations of elements and steps as set forth in claims 1 and 20 can be found in FIGs. 5 and 6 and the corresponding description of the specification. Applicants

respectfully submit that the combinations of elements as set forth in independent claims 1 and 5 are not disclosed or suggested by the references relied on by the Examiner.

The Examiner has correctly acknowledged that Do fails to disclose the multiple-layer structure of the winding coil. However, the Examiner turned to rely on Miyamoto's multiple-layer structure of the winding coil.

As shown in FIG. 5 of Miyamoto, the primary coil 13 is a four-layer structure, including a copper wire 13a, a polyester imide layer 13b, a polyamide imide layer 13c, and a self-welding layer (epoxy resin) 13d. The self-welding layer 13d surrounds the polyamide imide layer 13c such that the four-layer structure becomes an integral structure. The Examiner referred to the self-welding layer 13d as the self-lubricating polyamide layer of the present invention. Applicants respectively disagree.

In particular, as embodied in FIGS. 5 and 6 of the present application, the winding coil is a five-layer structure, including a copper wire 30, a polyester imide layer 32, a polyamide imide layer 34, a self-lubricating polyamide layer 36, and a molding material 20. The molding material 20 surrounds the self-lubricating polyamide layer 36 such that the five-layer structure becomes an integral structure. In other words, Miyamoto's self-welding layer 13d is more like the molding material 20 as shown in FIG. 5 of the present application, not the self-lubricating polyamide layer 36. Accordingly, Miyamoto nowhere discloses any self-lubricating polyamide layer, and therefore fails to teach "a self-lubricating polyamide layer... a molding material surrounding the self-lubricating polyamide layer such that the conductive wire, the self-lubricating polyamide layer and the molding material together are an integral structure, the self-lubricating polyamide layer being located between the conductive wire and the molding

material” as recited in amended claim 1 and “a self-lubricating polyamide layer... a molding material surrounding the self-lubricating polyamide layer such that the conductive wire, the polyester imide layer, the polyamide imide layer, the self-lubricating polyamide layer and the molding material together are an integral structure, the self-lubricating polyamide layer being located between the conductive wire and the molding material” as recited in amended claim 5.

In addition, Miyamoto discloses that the self-welding layer 13d is epoxy resin, but fails to teach that the epoxy resin is a self-lubricating polyamide layer. Although the Examiner relied on Gardos’ teaching of a self-lubricating polymide (see col. 1, lines 35-44), it is not the self-lubricating polyamide as recited in amended claims 1 and 5. Furthermore, although Gardos discloses the self-lubricating polymide, neither Gardos nor Miyamoto provides the motivation to modify Miyamoto’s epoxy resin to be Gardos’ self-lubricating polymide, not to mention the facts that (1) Gardos’ self-lubricating polymide is not the self-lubricating polyamide as recited in amended claims 1 and 5, and (2) Miyamoto’s epoxy resin is not for the purpose of self-lubrication but for molding.

Accordingly, none of the references utilized by the Examiner individually or in combination teaches or suggests the limitations of independent claims 1 and 5. Therefore, Applicants respectfully submit that independent claims 1 and 5 clearly define over the teachings of the utilized references.

In addition, claims 2-4 and 6 depend, either directly or indirectly, from independent claims 1 and 5, and are therefore allowable based on their respective dependence from independent claims 1 and 5, which are believed to be allowable.

In view of the above remarks, Applicants respectfully submit that claims 1-6 clearly define the present invention over the references relied on by the Examiner. Accordingly, reconsideration and withdrawal of the rejection under 35 U.S.C. § 103 are respectfully requested.

CONCLUSION

All the stated grounds of rejection have been properly traversed and/or rendered moot. Applicants therefore respectfully request that the Examiner reconsider all presently pending rejections and that they be withdrawn.

It is believed that a full and complete response has been made to the Office Action, and that as such, the Examiner is respectfully requested to send the application to Issue.

In the event there are any matters remaining in this application, the Examiner is invited to contact the undersigned at (703) 205-8000 in the Washington, D.C. area.

Application No.: 10/532,872
Amendment dated December 14, 2006
Reply to Office Action of September 15, 2006

Docket No.: 0630-2306PUS1

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If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§1.16 or 1.17; particularly, extension of time fees.

Dated: December 14, 2006

Respectfully submitted,

By 
James T. Eller, Jr.

Registration No.: 39,538
BIRCH, STEWART, KOLASCH & BIRCH, LLP
8110 Gatehouse Road
Suite 100 East
P.O. Box 747
Falls Church, Virginia 22040-0747
(703) 205-8000
Attorney for Applicant

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Attachment: Replacement Sheets